Development of Competency-Based On-Line Public Health Informatics Tutorials: Accessing and Using On-line Public Health Data and Information

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In response to training and information needs of the public health workforce, the New York City Department of Health and Mental Hygiene, in collaboration with the Department of Biomedical Informatics, Columbia University and the New York Academy of Medicine, is developing a series of on-line, interactive tutorials in public health informatics. The goal is to teach public health practitioners how to locate, use, and disseminate data and information on the Internet, while imparting basic informatics principles. Course content is based on Public Health Informatics Competencies[1], and evaluation will be performed by measuring changes in self-efficacy and knowledge as well as determining user satisfaction.

Background: Public health practitioners are experiencing an increasing reliance on technology and data, and much attention is being given to the training needs of the public health workforce[2]. Many resources needed for supporting public health efforts can be found on-line, but training in the use of those resources is important in order to increase efficiency and accuracy. Enumerations of the public health workforce reveal a group with a wide variety of work settings, tasks to perform, and education[3] with a need for training in informatics principles, including Internet research and the use of data[4]. These workers have expressed interest in on-line education[5], the use of which is supported by the U.S. Department of Health and Human Services[6]. Despite this, no on-line course on accessing public health resources on the Internet was found in searches of the medical literature and the Internet.

To address this issue, the New York City Department of Health and Mental Hygiene is developing a series of tutorials. The goal of the tutorials is to build skills in finding and appropriately using health databases and synthesized information on-line. The titles are: "Finding Public Health Datasets on the Internet," "Finding Public Health Information on the Internet," and "Presenting Data and Information Clearly."

Project Description: The three tutorials are targeted towards mid-level public health workers, both in government and community settings. The curriculum is based on selected Public Health Informatics Competencies[1]. Because the tutorials are designed as discrete units, users can complete the sections they desire, and because they are offered on-line, can navigate at their own pace.

The tutorials will provide real-time, hands-on practice with the websites and principles being introduced. This will be accomplished by displaying the tutorial in one frame while users navigate the actual websites in another frame. Short tasks, such as finding rates of a disease in a specific demographic group, are assigned with hints and answers provided in popup windows. The tutorial will cover potentially useful websites such as CDC Wonder, Ferret, National Center for Health Statistics, and Infoshare. Informatics principles will also be presented, including data standards, data security, assessing the quality of on-line data and information, and performing efficient Internet searches. The last section will instruct users in synthesizing the acquired information and data into clear presentations.

Evaluation of achievement of objectives by users will be performed with pre- and post-tutorial questionnaires. Responses will be evaluated for changes in self-efficacy of performing specific tasks as well as changes in knowledge. Basic demographic information will be collected to determine if scores are related to education, work experience, or other user characteristics. User satisfaction will also be assessed.

References

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